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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,298	03/29/2001	Juergen Baumler	LMPY-8410	6837

7590

08/28/2002

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EXAMINER

LANDAU, MATTHEW C

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 08/28/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/823,298

Applicant(s)

BAUMLER, JUERGEN

Examiner

Matthew Landau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 2, 14-30, 34, and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-13,31-33 and 36-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Election/Restrictions*

1. Claims 2, 8, 14-30, 34, and 35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

### *Drawings*

2. Figures 1-5, 10A, 10B, and 16 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the features canceled from the claims: the arc angle in the range of 50 to 10 degrees, the extruded profile of claim 7, the discharge circuit of claims 31, 32, 36, and 38 and the motor of claim 38. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Objections***

3. Claim 38 is objected to because of the following informalities: the word “blow” in line 13 should be replaced with “blower”. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 3-7, 9-13, 31-33, and 36-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitations “the axis” in line 11, “the first end” in line 17, “the shafts” in line 17, and “the second end” in lines 17 and 18. There is insufficient antecedent basis for this limitation in the claim. Furthermore, line 14 refers to “said hubs” and “the hubs”. It is unclear if “said hubs” and “the hubs” are referring to the same set of hubs. It is also unclear how a hub can “describe” a cylindrical circumference, or how an edge can “describe” an arc. It is also unclear how a cylindrical circumference can have an arc angle in the range of 50° to 10°.

Claim 3 recites the limitation “the flange cross-section” in 23. There is insufficient antecedent basis for this limitation in the claim.

In regards to claim 7, the limitation “extruded profile” renders the claim indefinite. It is unclear what a blade with an extruded profile entails.

In regards to claim 31, the limitation "said flange cross-sectionally overlaps said blowers" renders the claim indefinite. It is unclear how a flange overlaps a blower, and it is further unclear what is meant by cross-sectionally overlapping.

In regards to claim 32, the limitation, "said flange is cross-sectionally non-overlapping a downstream arc" renders the claim indefinite. It is unclear how a flange does or does not overlap an arc. It is further unclear what is meant by cross-sectionally non-overlapping.

In regards to claim 33, it is unclear what is meant by the limitation "said downstream arc is cross-sectionally disposed between said flange and said discharge volume."

In regards to claim 36, the limitation "said outer enclosure of said support housing apart from said electrode support bar" renders the claim indefinite. It is unclear which feature is apart from the electrode support bar. Furthermore, claim 36 recites the limitation "the discharge chamber" in line 14. There is insufficient antecedent basis for this limitation in the claim.

Claim 38 recites the limitation "the discharge chamber" in line 7. There is insufficient antecedent basis for this limitation in the claim.

In regards to claim 39, the limitation "a narrowed end portion around a thicker middle portion" renders the claim indefinite. It is unclear how a single end portion can be around a middle portion.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 31-33 and 38-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoag.

In regards to claim 31, as best the examiner can ascertain the claimed invention, Figures 2 and 6 of Hoag discloses a gas discharge laser, comprising: a laser tube filled with a gas mixture; a plurality of electrodes (19U and 19D), including a pair of main discharge electrodes (19U and 19D), within the discharge chamber DS connected to a discharge circuit (see column 10, lines 24-29) for energizing the gas mixture; a optical resonator for generating a laser beam (see column 11, lines 21-37); and a cross-flow blower assembly 21 including a pair of longitudinally adjacent and coaxially disposed cylindrical cross-flow blowers (63a and 63b), and a flange 65b supportingly disposed therebetween, wherein said flange cross-sectionally overlaps said blowers by less than 50%.

In regards to claim 32, as best the examiner can ascertain the claimed invention, Figures 2 and 6 of Hoag disclose a gas discharge laser, comprising: a laser tube filled with a gas mixture; a plurality of electrodes (19U and 19D) within the discharge chamber DS connected to a discharge circuit (see column 10, lines 24-29) for energizing the gas mixture, said plurality of electrodes (19U and 19D) including a pair of main discharge electrodes (19U and 19D) spaced

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apart by a discharge volume; a optical resonator (see column 11, lines 21-37) for generating a laser beam; and a cross-flow blower assembly 21 including a pair of longitudinally adjacent and coaxially disposed cylindrical cross-flow blowers (63a and 63b), and a flange 65b supportingly disposed therebetween, wherein said flange is cross-sectionally non-overlapping a downstream arc of said blowers.

In regards to claim 33, as best the examiner can ascertain the claimed invention, Figure 2 of Hoag discloses said downstream arc is cross-sectionally disposed between said flange 65b and said discharge volume DS permitting substantial interflow between portions of the gas mixture circulated by each of said pair of blowers before said portions reach the discharge volume.

In regards to claim 38, Figure 6 of Hoag discloses a gas discharge laser, comprising: a laser tube defined by a support housing filled with a gas mixture; a plurality of electrodes (19U and 19D) within the discharge chamber connected to a discharge circuit (see column 10, lines 24-29) for energizing the gas mixture, said plurality of electrodes including first and second main discharge electrodes spaced apart by a discharge volume; a optical resonator for generating a laser beam (see column 11, lines 21-37); and a cross-flow blower assembly 21 for circulating the gas mixture through said discharge volume, said cross-flow blow assembly 21 including a shaft 61 rotated by a motor 59, said shaft 61 including a coupling segment (shown between the flange 65b and the blower 63a) with a longitudinally non-uniform thickness. The intended use limitation "such that when said blower vibrates in bending mode, said coupling segment rocks smoothly within a mating coupling of the support housing" does not patentably distinguish the claimed invention over the prior art.

In regards to claim 39, as best the examiner can ascertain the claimed invention, Figure 6 of Hoag discloses said coupling segment (shown between the flange 65b and the blower 63a) includes a narrowed end portion around a thicker middle portion.

In regards to claim 40, Figure 6 of Hoag discloses said coupling segment (shown between the flange 65b and the blower 63a) is rounded.

8. Claim 36 rejected under 35 U.S.C. 102(a) as being anticipated by the admitted prior art.

Figures 4 and 5 of the instant application discloses a gas discharge laser 200, comprising: a laser tube defined by a support housing 211 filled with a gas mixture, said support housing including an outer enclosure (surrounding the housing 211); a plurality of electrodes (207 and 208) within the discharge chamber. It is inherent for the electrodes to be connected to a discharge circuit for energizing the gas mixture. Without a circuit for supplying power to the electrodes, the laser device would be inoperable. Figures 4 and 5 of the instant application further disclose said plurality of electrodes (207 and 208) including first 207 and second 208 main discharge electrodes spaced apart by a discharge volume, said first main electrode 207 being supported proximate to outer enclosure, said second main electrode 208 being supported by an electrode support bar 209 coupled at either end with said outer enclosure; a optical resonator (between the electrodes 207 and 208) for generating a laser beam; and a cross-flow blower assembly including a pair of longitudinally adjacent and coaxially disposed cylindrical cross-flow blowers (202 and 203), and a flange 201 for coupling said blowers with said outer enclosure of said support housing 211 apart from said electrode support bar 209. Note that



Figures 4 and 5 are discussed in the background section of the instant application and are therefore considered prior art.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoag.

In regards to claim 41, the difference between Hoag and the claimed invention is a difference in maximum and minimum thickness of said coupling segment is less than 1.0 mm. It would have been obvious to the ordinary artisan at the time the invention was made to modify the invention of Hoag by using a coupling segment that has a difference in maximum and minimum thickness less than 1.0mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

In regards to claim 42, the difference between Hoag and the claimed invention is the difference being more than 0.005mm. It would have been obvious to the ordinary artisan at the time the invention was made to modify the invention of Hoag by using a coupling segment that has a difference in maximum and minimum thickness more than 0.005mm, since it has been held

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that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

In regards to claim 43, the difference between Hoag and the claimed invention is a difference in maximum and minimum thickness of said coupling segment is between 0.005mm and 0.05mm. It would have been obvious to the ordinary artisan at the time the invention was made to modify the invention of Hoag by using a coupling segment that has a difference in maximum and minimum thickness between 0.005mm and 0.05mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

***Allowable Subject Matter***

11. Claims 1, 3-7, and 9-13 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not show a flange comprising two ends, the first end coupling to the shafts of the first and second blowers, the second end coupling to the housing.

12. Claim 37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter: the prior art does not show said flange couples said blowers to said support housing only at said outer enclosure.

*Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicants disclosure. Klopotek discloses a gas discharge laser comprising a housing, an upper electrode, a lower electrode, and a lower electrode support.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Landau whose telephone number is (703) 305-4396.

The examiner can normally be reached from 8:00 AM-4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



EDDIE LEE  
SUPERVISORY PATENT EXAMINER  
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Matthew C. Landau